

**REMARKS**

In the Office Action, specification was objected to due to certain informalities and as failing to provide support for the claimed subject matter in accordance with 37 C.F.R. 1.75 (d) (1) and M.P.E.P. § 608.01(o). Claims 1, 4-10, and 18-29 were rejected. Claims 2 and 3 were objected to as being dependent upon a rejected base claim. Claims 11-17 were allowed. By the present Response, claims 1, 3, 19-27, and 29 are amended. Claims 2, 18, and 28 are canceled. A new claim 30 is added. Upon entry of the amendments, claims 1, 3-17, 19-27 and 29-30 will be pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

**Objection to the Specification**

The specification was objected to because of certain informalities (paragraphs 7 and 31 being non-idiomatic). Paragraphs 7 and 31 of the specification have been amended to obviate the objections raised in the Office Action. Review and acceptance of the replacement paragraphs are requested.

Also, the specification was objected to as failing to provide support for the claimed subject matter in accordance with 37 C.F.R. 1.75 (d) (1) and M.P.E.P. § 608.01(o). Paragraphs 20, 21, 24, and 32 of the specification have been amended to obviate the objections raised in the Office Action. Specifically, paragraph 20 has been amended to provide support for claimed subject matter of claims 6, 14 and 26. Paragraph 21 has been amended to provide support for the claimed subject matter of claims 10 and 17. Paragraph 24 has been amended to provide support for the claimed subject matter of claims 7, 8 and 15. Paragraph 32 has been amended to provide support for the claimed subject matter of claim 21. No new matter has been added. Review and acceptance of the replacement paragraphs are requested.

**Rejections Under 35 U.S.C. § 102**

In the Office Action, claims 1, 4, 6-8, 18-21, 23-24 and 26 were rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Patent 10-26,072. Claims 1, 4-8, 18-20, and 23-26 were rejected under 35 U.S.C. § 102(b) as being anticipated by European Patent 1,308,619. Claim 18 was rejected under 35 U.S.C. § 102(b) as being anticipated by Tuerk, (U.S. Patent 249,274, hereinafter “Tuerk”).

These rejections were made to the independent claims 1, 18, 19, 21, and 23 in view of prior art. However, the Examiner indicated that the subject matter of claim 2, for example, was allowable. Similar language to that found in claim 2 has been added to the independent claim 1, by this Response. Amended independent claim 1 recites, *inter alia*, “at least one high efficiency injector assembly comprising a spherical valve configured to provide the flow of water from the distributor to the runner.” Claim 2 has been canceled. Accordingly, claim 3 has been amended to depend appropriately from amended independent claim 1.

Independent claim 18 is canceled by this Response. Amended independent claims 19 and 21 recite, in generally similar language, *inter alia*, “wherein the Pelton turbine comprises *at least two needle valve injector assemblies alternately disposed with at least two high efficiency injector assemblies to provide a modulated flow of water from the needle valve injector assemblies.*” (Emphasis added.) Claims 20 and 22 have been amended to depend appropriately from the amended independent claims 19 and 21, respectively. Amended independent claim 23 recites, *inter alia*, “wherein the Pelton turbine comprises *at least two needle valve injector assemblies alternately disposed with at least two high efficiency injector assemblies.*” (Emphasis added) Claims 24, 25, and 26 have been amended to depend appropriately from the amended independent claim 23.

As set forth in paragraph 25 of the present patent application, the water flow 58 from the penstock as indicated in FIG. 1 is directed to the distributor 26. The water then

impinges on the runner 32 through a plurality of needle valve injector assemblies 28 and high efficiency injector assemblies 36. The needle valve injector assemblies 28 and the high efficiency injector assemblies 36 are disposed alternately around the distributor 26.

First, Figures 1 and 2 of Japanese Patent 10-26,072 cited by the Examiner does not illustrate or teach at least two needle valve injector assemblies alternately disposed with at least two high efficiency injector assemblies as recited by the independent claims 21 and 23. In contrast, the cited reference discloses three nozzles 4a, 4b, 4c provided to the two branch pipes 3. *See, e.g.*, Japanese Patent 10-26,072 at page 2, paragraph 10; *see also* FIG. 1 and FIG. 2. Clearly, the foregoing passage discloses only one needle valve. For at least this reason, Japanese Patent 10-26,072 cannot anticipate independent claims 1, 19, 21, and their dependent claims.

Second, European Patent 1,308,619 cited by the Examiner similarly does not suggest or teach at least two needle valve injector assemblies alternately disposed with at least two high efficiency injector assemblies as recited by the independent claims 19 and 23. In contrast, the cited reference discloses a multi-jet Pelton turbine having a combination of jets with a fixed diameter, and jets with a variable outlet of water volume, whereby according to power demands and water supply, individual fixed jets are switched in or out, and the variable fixed jets are switched in or out, and the variable jets cover a water demand which lies between the water throughput delivered from switched in open fixed jets and that of a throughput deliverable from a single closed fixed jet. *See, e.g.*, European Patent 1,308,619 at page 1, abstract; *see also*, FIG. 1 and FIG. 2. Clearly, it is evident that jets with fixed diameter and jets with a variable outlet of water volume are not disposed alternately. In view of these deficiencies, among others, European Patent 1,308,619 cannot anticipate independent claims 1, 19, 23, and their dependent claims.

For these reasons, the Applicant respectfully requests withdrawal of the foregoing rejections under 35 U.S.C. § 102.

**Rejections Under 35 U.S.C. § 103**

The Examiner rejected claims 9-10, 21-22, 27-28, and 29 under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent 10-26,072, or in view of European Patent 1,308,619.

Independent claims 1, 19, 21, and 23 are allowable for the reasons cited above. Claims 9, 10, and 21 depend directly or indirectly from the allowable independent claims and are therefore believed to be allowable for the same reasons as summarized with respect to the allowable independent claims.

Amended independent claim 27 recites, *inter alia*, “wherein the *at least two high efficiency injector assemblies and the at least two needle valve injector assemblies are alternately disposed in the distributor.*” (Emphasis added.) Claim 28 has been canceled. Claim 29 has been amended to appropriately depend from the amended independent claim 27. As discussed above, neither Japanese Patent 10-26,072 nor European Patent 1,308,619 discloses at least two high efficiency injector assemblies and at least two needle valve injector assemblies alternately disposed in the distributor. As such, and because no other reference teaches such a Pelton turbine system, no combination of the references could possibly read on all of the recitations of claim 27.

Because the cited references cannot be combined to arrive at the invention set forth in claims 9-10, 21-22, 27-28, and 29, a *prima facie* case of obviousness of these claims cannot be supported. Thus, reconsideration and allowance of 9-10, 21-22, 27-28, and 29 depending therefrom are requested.

**New claims**

One new claim has been added by this response. No new matter has been added. The new claim is believed patentable for at least the reasons set forth above with respect to independent claims 1, 19, 21, 23, and 27.

**Conclusion**

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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